ABSTRACT OF THE DISTRICT

Maraging steel with improved machinability, good weldability, and high corrosion resistance, a process for the heat treatment of such a steel, as well as its use. According to the invention this steel contains (in % by weight) 0.02 - 0.075 % carbon; 0.1 - 0.6 % silicon; 0.5 - 0.9 % manganese; 0.08 - 0.25% sulfur; maximum 0.04%; phosphorus; 12.4 - 15.2 % chromium; 0.05 - 1.0 % molybdenum; 0.2 - 1.8 % nickel; maximum 0.15 % vanadium; 0.1 - 0.45 % copper; maximum 0.03 % aluminum; 0.02 - 0.08 % nitrogen; as well as optionally one or more additional alloying elements up to maximum 2.0 %, residual iron, and impurities caused in manufacturing, and a ferrite percentage in the structure of less than 28% by volume. A process is also provided for the heat treatment of a maraging steel with improved machinability, which process makes an object that is through-hardened even with a large cross-section, lies essentially in that a steel block with the above composition is subjected in a first step to an annealing treatment for the formation and adjustment of a ferrite percentage in the structure and in a second step a hot forming of the same takes place, after which in a third step a soft annealing and then a thermal tempering are performed.